

²⁶⁹Sg

Ellison et al. described the discovery of ²⁶⁹Sg in 2010 in “New superheavy element isotopes: ²⁴²Pu(⁴⁸Ca, 5n)²⁸⁵114” (2010EI06). ²⁴²PuO₂ targets were bombarded with a 247 MeV ⁴⁸Ca beams from the Berkeley 88-in. cyclotron and ²⁸⁵114 was produced in (5n) fusion-evaporation reactions. ²⁶⁹Sg was populated by subsequent α decay. Residues were separated with the Berkeley Gas-Filled Separator BGS and detected in multiwire proportional counters and silicon strip detectors. Subsequent radioactive decay events were recorded in the strip detectors and additional silicon chips forming a five-sided box. “The chain continued with four subsequent α -like events... after 140 ms, 8.21 ms, 346 ms, and 185 s with energies of 10.31, 10.57, 9.59, and 8.57 MeV, which are interpreted as the successive α decays of ²⁸¹₁₁₂Cn, ²⁷⁷₁₁₀Ds, ²⁷³₁₀₈Hs, and ²⁶⁹₁₀₆Sg, respectively.” A single decay chain was observed. A previously reported observation of ²⁶⁹Sg (1999Ni03) was later retracted (2002Ni10).

Adapted from reference (2013Th02)

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2002Ni10 V. Ninov, K. E. Gregorich, W. Loveland, A. Ghiorso *et al.*, Phys. Rev. Lett. **89**, 039901 (2002).
2010EI06 P. A. Ellison, K. E. Gregorich, J. S. Berryman, D. L. Bleuel *et al.*, Phys. Rev. Lett. **105**, 182701 (2010).
2013Th02 M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

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